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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,795	08/17/2006	Teruo Higa	939_079	8688

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BURR & BROWN
PO BOX 7068
SYRACUSE, NY 13261-7068

EXAMINER	
KIM, TAEYOON	
ART UNIT	PAPER NUMBER
1651	
MAIL DATE	DELIVERY MODE
03/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,795	HIGA, TERUO	
	Examiner	Art Unit	
	TAEYOON KIM	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/16/07; 8/17/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-6 are pending.

As indicated in the interview summary on 11/14/2008, the requirement for restriction/election mailed on 11/7/2008 has been withdrawn.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The term "inorganic" in claims 2 and 3 does not have a proper antecedent basis from the specification.

The term "aromatic component" in claim 3 does not have a proper antecedent basis from the specification.

The limitation of "enhancing a self-decomposition rate" in claim 6 does not have a proper antecedent basis from the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The intended scope and meaning of the claimed invention are unclear. Applicant claims a method of producing detergent but does not set forth the metes and bounds of

the steps required for the method. Critical elements of applicant's invention appear to be missing from the cited claims as it would appear that the claims as written would read such that the steps disclosed in the claims are sufficient in a production of a detergent. However, the claims do not disclose any inclusion of detergent or any step with regard to the making a detergent.

The specification would appear to set forth that applicant's invention requires detergent but the cited claims lack this critical limitation. The cited claims lack the essential elements to particularly point out and distinctly claim this subject matter which applicant regards as the invention. It appears that the specification discloses that the addition of EM and EM-X in a detergent production method or a detergent to enhance saponification degree of the detergent. However, the current claims do not disclose such limitations and merely claim that steps of compounding a baked ceramic powder with EM would result in the formation of detergent.

Therefore, it is unclear what the intended scope of the cited claims is, the claims must be considered indefinite and rejection under the second paragraph of this statute is appropriate.

Claims 1-3 disclose the term "a raw material" and it is not clear what subject matter would be the raw material. It appears that the raw material in claim 1 is a baked ceramic powder, and the raw material in claim 2 is organic and inorganic materials. If this is the case, it is not clear what subject matter the term "a raw material of claim 2" as disclosed in claim 3 intends to point out.

Claim 3 discloses the term "the detergent". Since claims 1 and 2 do not clearly disclose what would be the detergent produced, therefore, it is not clear what the term "the detergent" in this claim intends to point out.

The term "a fat of raw material of the detergent" in claim 3 is not clear what subject matter the term intends to claim. Clarification is required.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The detergent or a step of producing detergent, critical or essential to the practice of the invention, but not included in the claims is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim 1 discloses a method step of compounding an aged and baked ceramic powder comprising EM mixed with an antioxidant substance produced by the EM and a clay. However, it is not clear how this compounding step using the ceramic powder results in production of detergent. According to the specification (par. 10), it is disclosed that the method involves compounding EM and EM-X ceramic powder with a detergent. However, the current claim does not claim that the compounding step and/or additional steps disclosed requires a detergent, rather it discloses that by compounding a baked ceramic powder containing EM would result in a production of detergent. Furthermore,

based on the flowcharts in Drawings (Figs. 1 and 2), the current claims omit essential and critical element/steps required in the method.

Claim 4 discloses that conducting fermentation and aging of a raw material by EM would result in the production of detergent. Again, considering the disclosure of the specification, this claim also misses the critical element of detergent or any method forming detergent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.,* 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uyama (EP1178108; IDS ref.) in view of Yuutoku (JP 08-252086; IDS ref.), Higa (US 5,602,065) and Irie (JP 2003145144; machine translation attached).

Uyama teaches a method of producing detergent comprising ceramic powder as a component in the detergent (Abstract).

Uyama does not teach that the ceramic powder comprises effective microorganisms (EM).

Yuutoku teaches that EM is mixed with a porous material such as zeolite (ceramic) and the material is used for environmental clean-up (Abstract), and thus used as a detergent component.

It would therefore have been obvious for the person of ordinary skill in the art at the time the invention was made to combine a ceramic powder of Uyama and EM of Yuutoku for the same purpose of making detergent with a reasonable expectation of success.

M.P.E.P. §2144.06 states "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re* Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also *In re* Crockett, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte* Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious).

Although Uyama in view of Yuutoku does not teach that the EM includes lactic acid bacteria, yeast and photosynthetic bacteria, it is considered as an inherent property of EM, since according to Higa, EM comprises microorganisms including actinomycetes, phototrophic bacteria, lactic acid bacteria, mold fungi and yeast (col. 2, lines 31-35).

Uyama in view of Yuutoku and Higa does not teach the ceramic powder comprising a condensed liquid of an antioxidant substance produced by EM.

Irie teaches that a water improver (cleaner; detergent) can be prepared by combining an EM ceramic containing EM or EM-X comprising an antioxidant enzyme extracted from EM (abstract).

It would therefore have been obvious for the person of ordinary skill in the art at the time the invention was made to substitute the ceramic powder used in the detergent composition of Uyama in view of Yuutoku and Higa with the EM-X ceramic of Irie as an art-recognized alternative.

The skilled artisan would have been motivated to make such a modification because the EM-X ceramic is considered the same ceramic used for the method of Uyama and also EM can be used as a detergent component as taught by Yuutoku, and thus a person of ordinary skill in the art would expect a reasonable success in substitution of the ceramic powder of Uyama with the EM-X ceramic of Sakanishi.

Since it is well known in the art that EM produces antioxidant materials according to Higa (col. 1, lines 56-62) and EM-X ceramic comprising antioxidant materials is useful in a dirt remover according to Irie, a person of ordinary skill in the art would recognize

that EM-X ceramic of Irie is a suitable alternative to the ceramic used in the method of producing detergent composition of Uyama in view of Yuutoku and Higa.

With regard to the limitation of claim 2 drawn to a step of compounding organic and inorganic materials treated by fermentation with EM, it is an inherent property of EM to ferment organic materials, it is considered that the composition used in the method of Uyama in view of Yuutoku, Higa and Irie would inherently produce organic and inorganic materials fermented by

With regard to the intended result of enhancing a saponification degree and a cleaning power or enhancing a self-decomposition rate after use to accelerate water purification of the claims, since the method of Uyama in view of Yuutoku, Higa and Sakanishi teaches the same method steps and materials as claimed in the current invention, it would have been obvious that the intended results obtainable from the method would be substantially similar, if not identical, to the claimed intended results.

The discovery of a new use for an old structure based on unknown properties of the structure *might* be patentable to the discoverer as a process of using. *In re Hack*, 245 F.2d 246, 248, 114 USPQ 161, 163 (CCPA 1957). However, when the claim recites using an old composition or structure and the "use" is directed to a result or property of that composition or structure, then the claim is anticipated. *In re May*, 574 F.2d 1082, 1090, 197 USPQ 601, 607 (CCPA 1978) and *In re Tomlinson*, 363 F.2d 928, 150 USPQ 623 (CCPA 1966). See M.P.E.P. § 2112.02.

Therefore, the invention as a whole would have been prima facie obvious to a person of ordinary skill at the time the invention was made.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAEYOON KIM whose telephone number is (571)272-9041. The examiner can normally be reached on 8:00 am - 4:00 pm ET (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Taeyoon Kim/
Examiner, Art Unit 1651